



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/749,752	12/28/2000	Taizo Akimoto	Q61244	4934

7590

01/16/2003

SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC
2100 Pennsylvania Avenue, N. W.
Washington, DC 20037-3202

EXAMINER

GOLDBERG, JEANINE ANNE

ART UNIT

PAPER NUMBER

1634

DATE MAILED: 01/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/749,752

Applicant(s)

AKIMOTO, TAIZO

Examiner

Jeanine A Goldberg

Art Unit

1634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 1-5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 10.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. This action is in response to the papers filed November 12, 2002. Currently, claims 1-11 are pending. Claims 1-5 have been withdrawn as drawn to non-elected subject matter.

Election/Restrictions

2. Applicant's election without traverse of Group III, Claims 6-11, in Paper No. 9 is acknowledged.

Priority

3. This application claims priority to Japanese foreign documents 372925/199 and 372926/1999, filed December 28, 1999.

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Should applicant desire to obtain the benefit of foreign priority under 35 U.S.C. 119(a)-(d) prior to declaration of an interference, a translation of the foreign application should be submitted under 37 CFR 1.55 in reply to this action.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 1634

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 6-7, 9-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Zeleny et al (US Pat. 6,215,894, filed February 26, 1999).

Zeleny et al. (herein referred to as Zeleny) teaches a system for scanning biochip arrays which includes a unique image array identifier recorded for each array, and a computer-stored record corresponding to each identifier and containing the parameters of the experiment in the array identified by the identifier (abstract). As seen in Figure 1, the microarray biochip contains two array regions and an identifier location. Figure 3, clearly illustrates the system which comprises an arrayer, a scanner, an analyzer, a computer system. Zeleny teaches that the identifier may be a number with numerals imprinted on the slide along with a bar code representation of the number (col. 2, lines 17-18). The experiment identifier is imprinted on the chip prior to the deposition of the array experiment, a means for attaching management information peculiar to the test piece to a predetermined location on the test piece (col. 2, lines 18-19)(limitations of Claim 6 a). A file folder (i.e., "directory") is opened in a computer system and is logically linked to the array identifier (col. 2, lines 20-21). The folder may contain various parameters of the experiment array, e.g., a map of the reagents deposited on the array, identification of the fluorescent tags and the reagents to which they are bonded, the

locations of any calibration dots on the chip, the identification of the scanning and processing protocols to be used in connection with the scanning process (col. 2, lines 23-27)(limitations of Claim 6). Moreover, the system is programmed to retrieve the information from the biochip (col. 2, lines 30-31)(limitations of Claim 6-7, 9-10). The biochip has been imprinted with experiment identifiers relating to the experiment performed in the regions. The identifiers comprise both a number and a corresponding bar code representation of the numeral. The identifier may be a number in which some of the digits identify experiment parameters of the array, others identify the source of the arrays, other may identify the scanning and analysis protocols or even-provide the operating parameters for those protocols, or identify the array itself (col. 3, lines 8-18). The array comprises an array of test spots, control spots and focus spots (col. 3, lines 20-22). Following the imprinting of the information on the biochip, the chips are loaded into an arrayer to deposit test spots, passed to a scanner to scan the bar codes, opens a file folder, analyzes the contents of the image maps, and generates an output table (col.3, lines 40-45). Thus, since Zeleny teaches every limitation of the claims, Zeleny anticipates the claimed invention.

5. Claims 6-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Noblett (US Pat. 6,362,004, filed November 9, 1999).

Noblett teaches a microarray scanning system for conducting experiments which includes an apparatus for translating the secured substrate in two axes where the substrate has at least one fiducial mark on the planar substrate as a means for

Art Unit: 1634

positioning and aligning the substrate for subsequent spot placement, analysis or comparison procedures. Figure 2 illustrates the microarray. The microarray scanning system includes an optical system, a detector, a positioning system and a computational device, such as a computer (col. 4, lines 3-5). The microarray comprises a plurality of target spots, first and second fiducial marks which can be imprinted having a predetermine shape (col. 5, lines 32-40). Noblett teaches that the first fiducial mark is approximately the same size as the size of the target spot and may include the same target material forming the target spots (col. 5, lines 40-43). Noblett also teaches the use of dilution spots adjacent to the array for use in calibrating the microarray scanning system (col. 5, lines 53-55). Since the placement of the test spots was done with reference to a fiducial mark, the spot placement software can map the coordinates of the target spots relative to the fiducial mark. The stored coordinates may be placed into the memory and used to improve the accuracy or execution of subsequent procedures such as quantitation (col. 7, lines 15-20). The quantification grid for placement over the microarrays locates the precise location of all hybridized spots. The quantification grid is generated from preprogrammed parameters (e.g. spot diameter, spot spacing and array spacing) to represent an initial regular grid (col. 7, lines 50-58). Therefore, the management information, fiducial marks, are formed during the spot placement operation, the fluorescent tags obtain information as to the probes and the management information and the computer stores the information. Thus, since Noblett teaches every limitation of the claims, Noblett anticipates the claimed invention.

Art Unit: 1634

6. Claims 6-7, 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Perttunen et al (US Pat. 5,968,728, October 1999).

Perttunen et al. (herein referred to as Perttunen) teaches a molecular detection device which includes a support member, a plurality of molecular receptors, a database, a processor, a placement apparatus and a data writing device (Figure 2, abstract). As seen in Figure 11 and 12, the support comprises id codes, molecular receptor sites and data. Perttunen teaches that the processor generates mappings of molecular receptors to sites of a molecular detection device. The processor may be a computer. Perttunen teaches "to deduce the molecular structures in the sample, the hybridization information is processed in conjunction with data indicating the arrangement of the molecular receptors" (col. 2, lines 40-43). The data can be stored in a database (col. 2, lines 46-47). The molecular receptors for binding or hybridizing have a predetermined structure which may include DNA probe for detecting a corresponding DNA sequence in a sample or RNA probe. Perttunen teaches that the molecular receptors can be bound to the surface using a primer, a gel or an adhesive. The apparatus also comprises a data writing device that writes data associated with the mapping directly to the support member. The data can include data which indicates or encodes the mapping and/or data which identifies the mapping. Additionally, the system includes a database which receives a signal associated with the mapping from the processor which can include an identification code for the mapping or data indicative of the mapping (col. 5, lines 7-10). Finally the support contains identification codes which allows determination that the support when separated are for the same device. The identification codes include a

Art Unit: 1634

series of human readable printed characters or a machine-readable bar code (col. 8, lines 55-62). Thus, since Perttunen teaches every limitation of the claims, Perttunen anticipates the claimed invention.

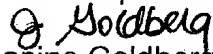
Conclusion


7. No claims allowable over the art.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Jeanine Goldberg whose telephone number is (703) 306-5817. The examiner can normally be reached Monday-Friday from 8:00 a.m. to 5:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Jones, can be reached on (703) 308-1152. The fax number for this Group is (703) 305- 3014.

Any inquiry of a general nature should be directed to the Group receptionist whose telephone number is (703) 308-0196.


Jeanine Goldberg
January 6, 2003


W. Gary Jones
Supervisory Patent Examiner
Technology Center 1600